PROCEEDINGS OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON

SERIES C. JOURNAL OF MEETINGS

VOLUME 23 No. 3, 1958

ORDINARY MEETING

WEDNESDAY, 7th May, 1958, at 5.30 p.m.

AGENDA

1. Proceedings of the Ordinary Meeting held on 2nd April, 1958.
2. Recommendations of candidates for Fellowship. First reading.
3. Recommendations of candidates for Fellowship. Second reading.
4. Announcement of election of new Fellows.
5. Additions to the Library [see p. 14].
6. Admission of Fellows.
7. Papers accepted for publication in the *Transactions*.
8. Exhibits.
9. Communications.

1. **Professor V. B. Wigglesworth, C.B.E., F.R.S.**

Recent work on the juvenile hormone.

[ABSTRACT]

Two years ago C. M. Williams found that the juvenile hormone is stored in considerable amount in the abdomen of the male *Cecropia* moth, from which it can be extracted, along with the fatty substances, by ether or alcohol. An account will be given of methods that have been developed for the purpose of estimating the relative concentration of the hormone in different extracts. While devising these methods, many of the earlier observations on the activities of the juvenile hormone have been confirmed and some new observations have been made.

2. **Dr. B. R. Laurence**

A colour film : " The breeding places of *Mansonioides* mosquitoes in the Gambia."

[ABSTRACT]

Mosquitoes belonging to the subgenus *Mansonioides* obtain their oxygen in the larval and pupal stages from the aerenchyma in the roots and leaves of aquatic plants. The eggs are laid on the underside of floating leaves, and this habit separates this subgenus from the other subgenera in the genus *Taeniorhynchus*. The film shows the breeding places, selected by the female mosquitoes, which contain a combination of plants with available aerenchyma and with floating leaves.

Tea will be served in the Library before the meeting.

NOTICES

Forthcoming Ordinary Meetings

4th June, 1958

Mr. W. Haufe (a visitor, Department of Agriculture, Lethbridge, Alberta, Canada).—Two films produced by Science Service, Ottawa: (1) The biting flies [of Northern Canada]; (2) Pollination of alfalfa in Canada.

2nd July, 1958

Dr. D. J. Lewis.—Some man-biting species of *Simulium*.

Proceedings of the Ordinary Meeting held on 2nd April, 1958.

Mr. W. V. Harris, Vice-President, in the Chair.

Present 52 Fellows and 9 Visitors.

The minutes of the Ordinary Meeting held on 5th March, 1958, were confirmed and signed by the Vice-President.

The names of the following candidates for election were read for the first time: Mr. John Albert Sydney Brasier, N.D.A.; Mr. John Hugh Brettell; Mr. Michael Gane; Mrs. Gouri Ganguly, M.Sc.; Mr. Ronald William Hodges, B.S., M.Sc.; Mr. Patrick Elliott Hulley; Dr. Vladimír Landa; Mr. Nitai Majumder, B.Sc.; Mr. Sankaranarayanan Sundararaman, B.Sc., M.Sc.; and Mr. Richard Thomas Thompson.

For the second time (taken as read): Miss Dorothy Susan Beales, B.Sc.; Mr. Peter Robin Chadwick, M.A.; Mr. Salvino P. Farrugia, B.Pharm.; Mr. C. Garrett-Jones, M.Sc.; Mr. John Marsden Goldsmid, B.Sc.; Professor Khwaja Abdul Haque; Mr. Dennis Stanley Hill, B.Sc.; Mr. Philip Ernest King, B.Sc.; Dr. John Harold Mundie; Professor Eugene Gordon Munroe; Mr. Austin John Pontin, B.A.; Mr. Hafiz Abdul Qayyum; Mr. William Reed; Mr. Jaivant Bhalchandra Sardesai, M.Sc.; Mr. Robert Calder Sneddon; Dr. James Simpson; Mr. Uma Shankar Srivastava; and Mr. Habib A. Zuberi.

The Secretary read the names of the following newly elected Fellows of the Society: Dr. Wilhelm Büttiker, World Health Organisation, Malaria Division, Palais des Nations, Geneva, Switzerland; Mr. Brian Digby Cooke, Casa Mia, Moor End Road, Mellor, Marple Bridge, *via* Stockport, Cheshire; Mr. Ezra Ephraim Ethan Donahaye, Cherry Bank, Stoney Lane, Bovingdon, Herts.; Dr. Anthony Richard Mead-Briggs, 8 Cholmley Road, Long Ditton, Surrey; Mr. Anthony Charles Neville, 97 Tutbury Road, Horninglow, Burton-on-Trent, Staffs.; Mr. John Rawnsley, c/o Capt. Webster, 7 Coverts Road, Claygate, Esher, Surrey; Mr. Wilfred Alexander Samarawickrema, London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1; Mr. Gerald Thomas Shute, Malaria Division, Amani, Tanganyika; and Mr. Peter Skidmore, Roses, Grains Road, Shaw, Lancs.

Thanks were voted to donors of gifts to the Library since the last meeting.

Dr. J. R. Audy, Mr. E. Donahaye, Mr. P. H. Giles, Mr. A. C. Neville, Mr. M. J. Parr and Mr. J. Rawnsley signed the Obligation Book and were admitted Fellows of the Society.

Dr. J. L. Harrison made a communication on nest founding in the Weaver Ant (*Oecophylla smaragdina*) in Malaya, where it exists as populous colonies in trees. The ants build nests by weaving together the leaves of the tree, the leaves being pulled together by a line of workers and then fastened with the silk of full-grown larvae, which are used as shuttles by the workers. The worker is a fair-sized rusty-red insect which bites ferociously, the Queen a bright green, and the male black. As it is protected by the savage workers, the Queen is not often seen, and very little seems to be known about it ; in particular, it is not one of the ants which normally flies to light in Malaya. As the building of a leaf nest is a co-operative effort, requiring a large number of workers and larvae, it is not easy to see how a single Queen can found a colony, but this latter difficulty has been explained by a recent observation. Dr. Harrison continued that banana trees in Malaya are often attacked by a leaf-rolling butterfly, the Banana Skipper, *Erionota thrax*, the larva making a cigar-shaped shelter for itself, open at the lower end, from a strip of the leaf. While searching bananas to destroy these larvae, an abandoned leaf-roll was found occupied by a single wingless Queen of *Oecophylla*, guarding two eggs and two newly hatched larvae. No workers were present there, or in that part of the garden, although there was an infested tree about fifty yards away. Evidently single Queens of this species can found nests, and use, as their first leaf-nest, a shelter made by some other insect.

Dr. F. I. van Emden showed a strange beetle larva found by Miss Janet Petersen in August, 1957, near Kumasi (Ghana). Two specimens were extracted in Berlese funnels from 72 cubic feet of very wet leaf litter lying in a thin layer on laterite soil of the Bobiri Forest Reserve. They were not much more than 1 mm. long and had a large globular sclerotised and setose ninth abdominal segment, and the head and mouthparts similar to those of certain Staphylinidae. Though the smallness, odd hind end and the large second (apical) antennal segment might suggest some unknown group of Pselaphid or Scydmaenid larvae, of which families very few larvae have been described, the well-developed ligula seemed to exclude these families, and the mouthparts and the head, with three ocelli, dentate nasale and well-developed coronal suture, seemed to indicate that the genus must belong to the Oxytelinae or Omaliinae in the wider sense, *i.e.* the " Oxytelidae " of Verhoeff minus Aleocharinae. A more definite identication was not at present possible.

Miss D. J. Jackson gave a paper on egg-laying and egg-hatching in some species of *Agabus*, an abstract of which appeared on pages 5–6.

In the discussion which followed, Dr. Hinton said the only beetle he had observed hatching was a Staphylinid, where it seemed as though the chorion was puffed up like a balloon. The chorion was pricked, but the resulting tear had no direct relation to the direction of movement of the egg burster.

Dr. F. van Emden agreed and continued that it was difficult to see just how the egg burster did function in the way which is generally accepted, and more research was needed.

Professor V. B. Wigglesworth suggested that the vitelline membrane was better termed the serosal cuticle. Miss Jackson was not certain she agreed with this, but they were both sure it was merely a matter of terminology.

Dr. H. E. Hinton gave a paper on the pigmented tissue of the Simuliidae, an abstract of which appeared on pages 6–7.

In the discussion which followed, Professor Wigglesworth asked whether there was any development of the muscles when the chromatophores start to migrate, to which Dr. Hinton replied that after the larval/pupal moult large muscle blocks develop ; just before the pupa sheds the last larval cuticle, it becomes in cross-section comparable to the adult, and the large muscles can be seen through the cuticle. The chromatophores give a guide to the insertion of muscles because they must have moved before the muscles become inserted.

Dr. D. J. Lewis remarked that in the young adult of *Simulium damnosum* the abdominal cuticle is dark, whereas in older adults it is rather transparent, and asked if this was due to movement of the chromatophores. Dr. Hinton replied that he had not studied the abdomen in detail; it was very similar all through development, though there must be some change.

PAUL FREEMAN, *Honorary Secretary.*

ADDITIONS TO THE LIBRARY

Presented

British Museum (Natural History). *Ruwenzori Expedition*, 1952. 8vo. London, 1958:
  Vol. 1, no. 1. *Introduction with list of localities*, by G. O. Evans and D. S. Fletcher.
  Vol. 1, nos. 2–3. *Arctiidae (except Nolinae), Thyretidae and Notodontidae*, by S. G. Kiriakoff.
  Vol. 1, no. 4. *Arctiidae, Nolinae*, by D. S. Fletcher.
  Vol. 1, no. 5. *Lymantridae*, by C. L. Collenette.
  Vol. 1, no. 6. *Geometridae*, by D. S. Fletcher.
  [The Trustees of the British Museum.]

British Museum (Natural History). *List of Serial Publications in the Library of the Department of Entomology.* 8vo. London, 1958. [The Librarian, British Museum (Natural History)].

Castellani, O. *Principali insetti dannosi, utili ed innocui alle piante, agli animali domestici ed all'uomo.* Sm. 8vo. Rome: Palombi, 1953. [The Author.]

Cloudsley-Thompson, J. L. *Spiders, scorpions, centipedes and mites.* 8vo. London: Permagon Press, 1958. [The Publishers.]

Fraser, F. C. *A reclassification of the order Odonata.* 8vo. Sydney: Roy. Zool. Soc. N.S.W., 1957. [The Author.]

Great Britain. Ministry of Agriculture, Fisheries and Food. *Common names of British insect and other pests.* Compiled by I. Thomas and H. W. Janson. 8vo. London: H.M.S.O., 1957. [*Tech. Bull. Min. Agric.* **6**.] [The Plant Pathology Laboratory, Harpenden, Herts.]

Horion, A. *Faunistik der mitteleuropäischen Käfer.* Bd. IV. *Sternoxia* (*Buprestidae*) *Fossipedes, Macrodactylia Brachymera.* Bd. V. *Heteromera.* 8vo. München, 1955–56. [Sonderband aus dem Museum G. Frey.] [By Exchange.]

Hynes, H. B. N. *A key to the adults and nymphs of British Stoneflies* (*Plecoptera*). 8vo. Ambleside, 1958. [*Sci. Publ. freshw. biol. Ass. Brit. Emp.* **17**.] [The Author.]

Oldroyd, H. *Collecting, preserving and studying insects.* 8vo. London: Hutchinson, 1958. [The Publishers.]

South African Museum's Association. *A list of zoological and botanical types preserved in collections in Southern and Eastern Africa.* Vol. 1. *Zoology.* Pt. 1. 8vo. Pretoria, 1958. [The Director, Transvaal Museum.]

Wakeland, C. The High Plains grasshopper. *Tech. Bull. U.S. Dep. Agric.* **1167**: 1–168, 1957. [United States Department of Agriculture.]

In addition, separates have been presented by Mr. R. G. Davies; Laboratorium voor Entomologie, Wageningen; Dr. H. Cleu; West African Cocoa Research Institute, Tafo; United States Department of Agriculture; Smithsonian Institution; Dr. A. L. Capener; Mr. E. B. Basden; The Royal Society; Mr. J. A. Whellan; Dr. T. T. Macan; University of Queensland, Department of Entomology; Miss E. N. Marks; Mr. D. S. MacLagan and Dr. G. A. Walton.

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